

Maricopa County Trip Reduction Program

2001 Cost Analysis

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Cost Analysis of Maintaining Trip Reduction Plans by Those Organizations in The Maricopa County Trip Reduction Program

INTRODUCTION

The purpose of this cost analysis is to determine an organization's average cost per participant, incurred by maintaining a trip reduction plan as one part of their participation in the Maricopa County Trip Reduction Program (TRP).

This analysis is based on information obtained from the most recent trip reduction plans of a stratified random sample of 199 organizations. These organizations were at least in their second year of the TRP. The selected 199 organizations represent about 19% of the organizations that met this study's requirements within the TRP.

In addition to the average overall cost per TRP participant, this analysis divides the costs into three categories of measures/strategies implemented by organizations. The 199 organizations are also divided into six groups of organizations dependent on the number of TRP participants in the organization. The following Methodology section will provide details about the three categories of measures/strategies and the six groups of organizations.

METHODOLOGY

At the time this study was conducted there were 1040 organizations participating in the Trip Reduction Program (TRP) and in at least their second year of the program. Organizations in their first year had no documentation associated with actual costs and only actual cost associated with specific measures/strategies were used. These 1040 organizations, with over 620,000 TRP participants, were divided by size into six groups, determined by the number of TRP participants in the organization. These six groups are:

- GROUP #1 = from 50 to 100 TRP participants
- GROUP #2 = 101 to 200 TRP participants
- GROUP #3 = 201 to 500 TRP participants
- GROUP #4 = 501 to 1000 TRP participants
- GROUP #5 = 1001 to 5000 TRP participants
- GROUP #6 = more than 5000 TRP participants

A stratified random sample based on each group was selected to represent each group.

Group #1 consists of 293 organizations. 56 organizations were selected randomly from this group. 56 is about 19 % of this group.

Group #2 consists of 320 organizations. 60 organizations were selected randomly from this group. 60 is about 19 % of this group.

Group #3 consists of 236 organizations. 46 organizations were selected randomly from this group. 46 is about 19 % of this group.

Group #4 consists of 85 organizations. 16 organizations were selected randomly from this group. 16 is about 19 % of this group.

Group #5 consists of 81 organizations. 16 organizations were selected randomly from this group. 16 is about 20 % of this group.

Group #6 consists of 24 organizations. 5 organizations were selected randomly from this group. 5 is about 21 % of this group.

Trip reduction measures/strategies are specific actions an organization can implement to reduce vehicle pollution. All the measures/strategies seen on trip reduction plans and implemented by the selected 199 organizations were divided into three categories. These categories are trip reduction Incentives, Subsidies and Communication. Below are examples of some typical measures/strategies found in each category:

Incentives

- preferred parking spaces
- drawings
- gifts
- discounts at local stores
- rideshare promotions
- emergency ride home
- lockers/showers
- alternate work schedules/flextime

Subsidies

- gas/commute expenses
- subsidized parking
- company vehicle for business
- bus subsidy
- vanpool subsidy

Communication

- newsletters
- company meetings
- CEO/management support memos
- TMA membership
- information centers
- post/announce winners
- committees
- distribute TRP info. / payroll stuffers

The trip reduction plan expenditures for each of these three categories were totaled for all the selected organizations and entered into spreadsheets. The computer was then programmed to calculate the total incentives, subsidies, and communication for each group and then used to determine the average cost per TRP participant of expenditures within each group and for the total of all groups. Averages of averages were not used in calculations.

The following calculation is an example of the method used to determine the annual cost per TRP participant for each category. This basic method was used to calculate all average per TRP participant costs. Special attention was given to assure averages of averages were NOT used.

Example:

- Group #99
- Each organization, in group #99, reported in their most recent plan, actual expenditures which were divided into the three categories; Incentives, Subsidies and Communication.

<u>Organization</u>	<u>Participant Count</u>	<u>Incentives</u>	<u>Subsidies</u>	<u>Communication</u>
A	75	460	773	775
B	100	379	468	1300
C	51	700	1578	645
D	67	256	358	345
E	69	56	785	865
F	84	249	754	899
G	79	379	498	672
TOTAL	525	\$2479	\$5214	\$5501

Average Per Category expense
per TRP Participant

$$= \frac{\text{Total Cost Per Category}}{\text{Total Participants in Category}}$$

Average Incentives expense
per TRP Participant

$$= \frac{\$2,479}{525}$$

Average Incentives expense
per TRP Participant

$$= \$4.72$$

RESULTS

The sample of 199 organizations in this study accounted for 148,061 participants, which is 24% of the participants in all the organizations that met this study's requirements. The sample's average annual cost for maintaining a trip reduction program was \$16.07 per TRP participant (Table I). The largest expenditures for program maintenance were Subsidies averaging \$9.40 per participant, followed by Incentives at \$5.94 and Communication at \$.73 (Table I).

Further evaluation revealed that the highest average cost per TRP participant of \$41.96 was reported by organizations with 101 to 200 participants (Table II). The lowest average cost per TRP participant of \$10.68 was reported by organizations with 1,001 to 5,001 participants (Table II).

In conclusion, it appears that there is a correlation between the number of TRP participants and the total cost per participant for maintaining a trip reduction plan. In other words, this analysis shows that larger organizations, on average, spend less per TRP participant to maintain a trip reduction plan, than smaller organizations.

Table I

**2001 Average Annual Costs Per TRP Participant
Incurred by Organizations for Maintaining
A Trip Reduction Program**

Maricopa County Regional Trip Reduction Program
2001 Cost Analysis

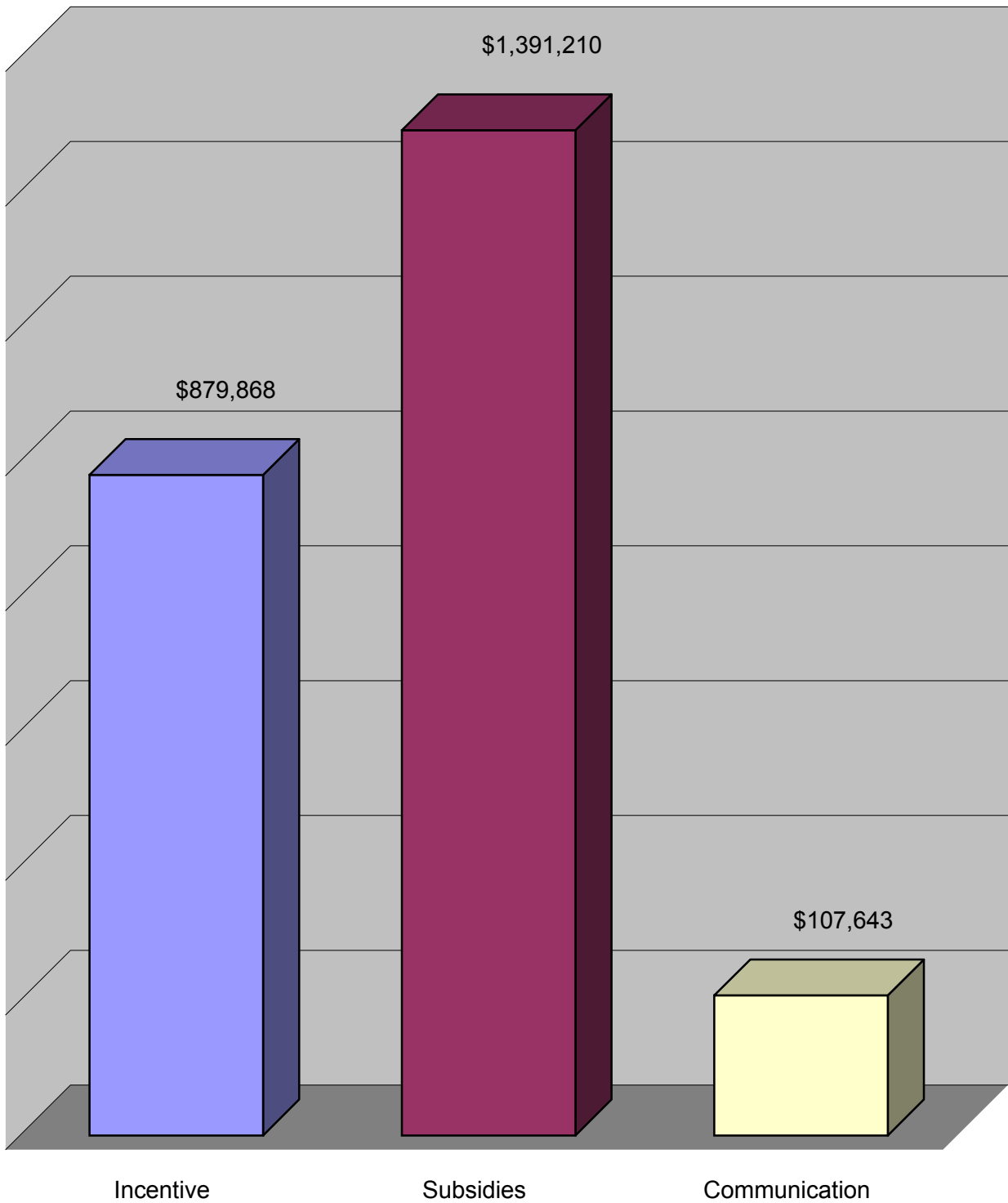
Base Numbers:

Total Organizations	1040	100%
Total Organizations in This Study	199	19%
Total TRP Participants	620,536	100%
Total TRP Participants in This Study	148,061	24%
Total Costs in This Study	\$2,378,721	100%
Total Incentive Costs in This Study	\$879,868	37%
Total Subsidies Costs in This Study	\$1,391,210	58%
Total Communication Costs in This Study	\$107,643	5%

Overall Average Annual Costs Per TRP Participant:

Average Annual TRP Participant Cost:	\$16.07
Incentives	\$5.94
Subsidies	\$9.40
Communication	\$.73

Total Measures/Strategies Costs Of Organizations In This Study



**Average Per Participant Measures/Strategies Costs
Of Organizations In This Study**

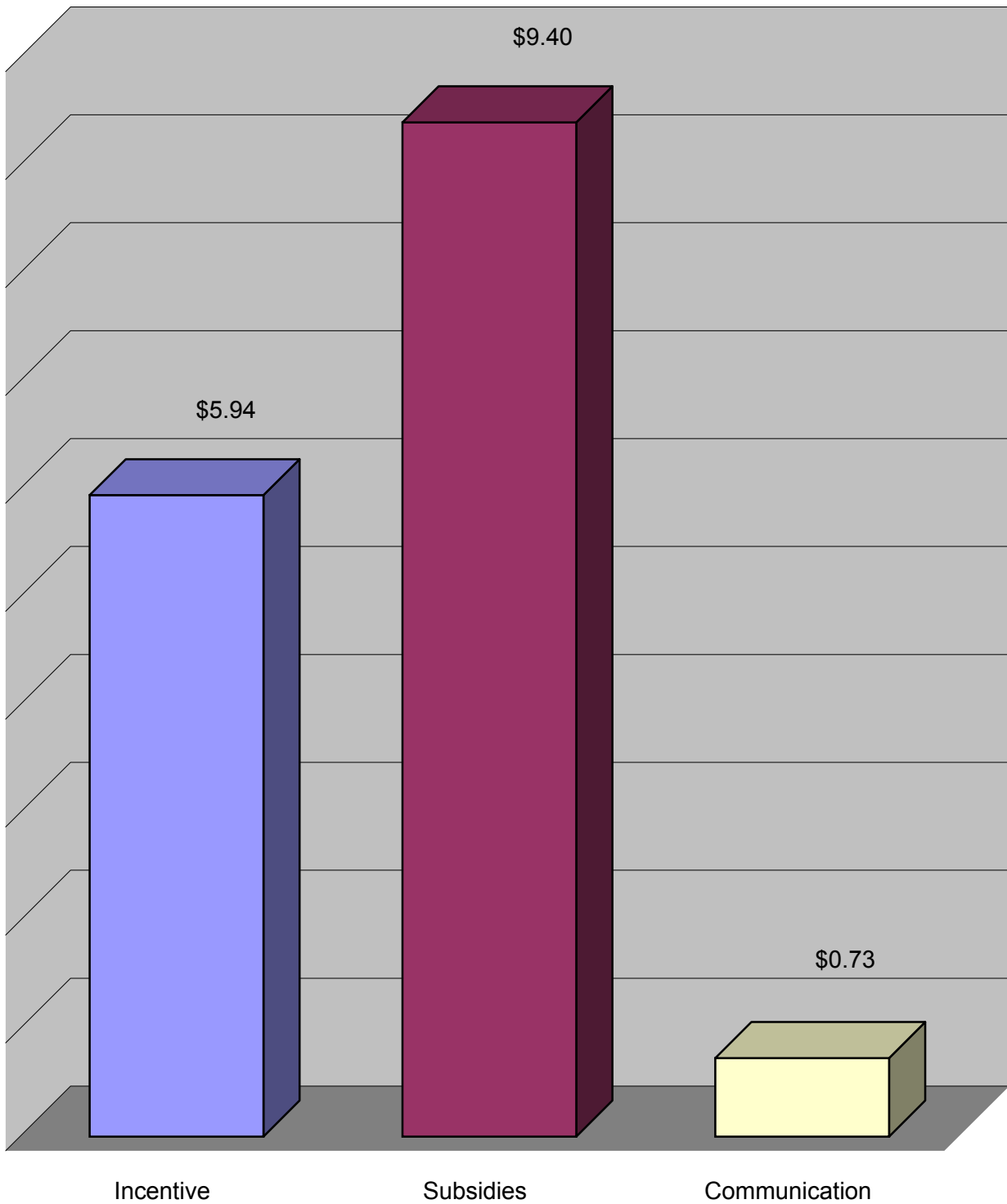
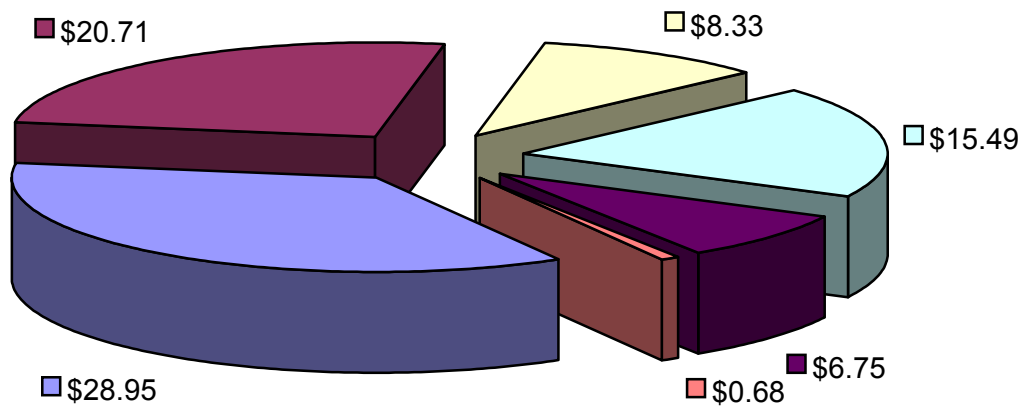


Table II

**2001 Average Annual Costs Incurred by Organizations
For Maintaining A Trip Reduction Program
By Organization Size**

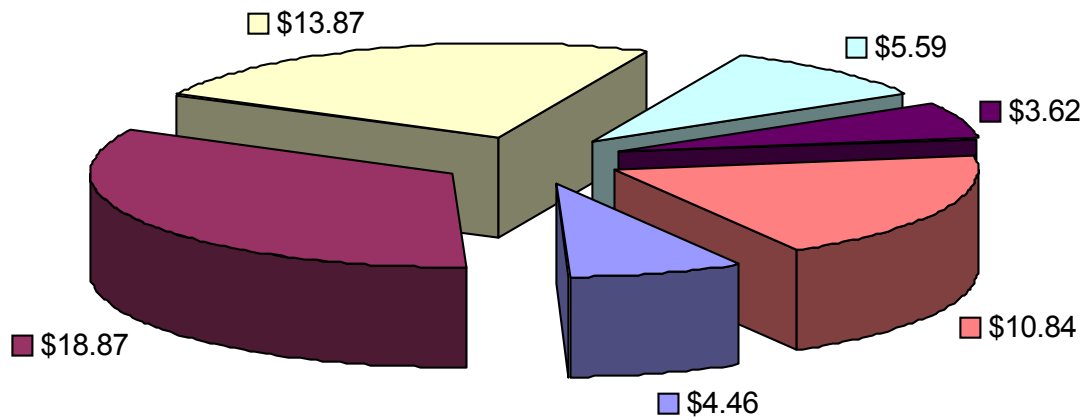
Maricopa County Regional Trip Reduction Program 2001 Cost Analysis						
Organization Size	50-100	101-200	201-500	501-1,000	1,001-5,000	5,001+
Sample of Organizations	56	60	46	16	16	5
Sample of Participants	4,282	8,696	14,535	11,506	33,264	75,778
Total Measures/ Strategies Cost	\$153,196	\$364,916	\$328,783	\$253,083	\$355,261	\$923,482
Total Per Participant	\$35.78	\$41.96	\$22.62	\$22.00	\$10.68	\$12.19
Total Incentives Cost	\$123,947	\$180,054	\$121,142	\$178,242	\$224,582	\$51,901
Average Per Participant	\$28.95	\$20.71	\$8.33	\$15.49	\$6.75	\$.68
Total Subsidies Cost	\$19,118	\$164,120	\$201,576	\$64,293	\$120,460	\$821,643
Average Per Participant	\$4.46	\$18.87	\$13.87	\$5.59	\$3.62	\$10.84
Total Com. Cost	\$10,131	\$20,742	\$6,065	\$10,548	\$10,219	\$49,938
Average Per Participant	\$2.37	\$2.39	\$.42	\$.92	\$.31	\$.66

Average Incentive Costs By Organization Size



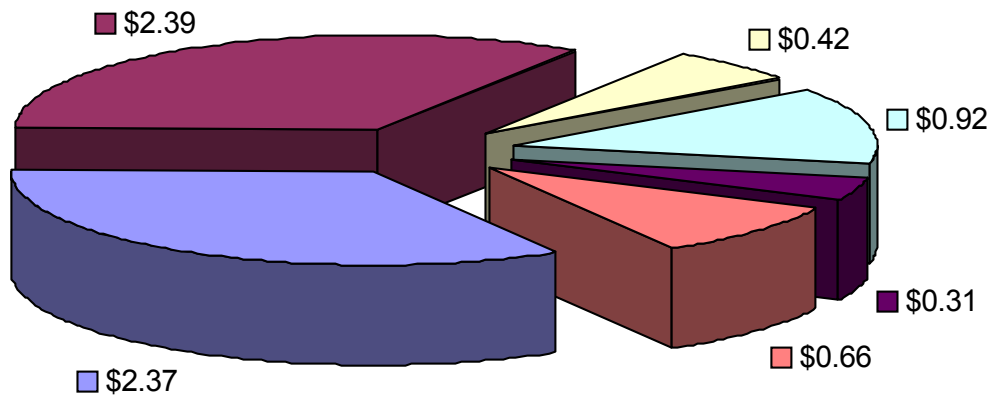
- Organization with 50 - 100 participants
- Organization with 101 - 200 participants
- Organization with 201 - 500 participants
- Organization with 501 - 1000 participants
- Organization with 1001 - 5000 participants
- Organization with 5000 + participants

Average Subsidies Costs By Organization Size



- Organization with 50 - 100 participants
- Organization with 101 - 200 participants
- Organization with 201 - 500 participants
- Organization with 501 - 1000 participants
- Organization with 1001 - 5000 participants
- Organization with 5000 + participants

Average Communication Costs By Organization Size



- Organization with 50 - 100 participants
- Organization with 101 - 200 participants
- Organization with 201 - 500 participants
- Organization with 501 - 1000 participants
- Organization with 1001 - 5000 participants
- Organization with 5000 + participants